

REMARKS

Claim 1 is amended herein and claims 2, 3, 11 and 12 are canceled. Support for the Amendment is found, for example in original claim 3 and at page 28, lines 8-9 of the specification.

I. Response to Claim Rejections under 35 U.S.C. § 103

Claims 1-5, 7-14 and 16-21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Aoshima et al (EP 1 235 107 A1) in view of Arias et al (US 6,933,093 B1) for the reasons of record.

Claims 6 and 15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Aoshima et al in view of Arias et al and further in view of Oshima et al (EP 1 176 467 A1) for the reasons of record.

Applicants respectfully submit that the cited references do not teach or suggest the present invention.

The Examiner recognizes that Aoshima does not teach a compound having a weight average molecular weight of 3000 or less and having at least one carboxylic acid group. However, the Examiner relies on Arias et al for the teaching of a radiation sensitive coating comprising a stabilizing acid, specifically benzoic acid to enhance shelf life.

Claim 1 is amended herein to recite that the polymerizable compound is an addition-polymerizable compound having at least one ethylenically unsaturated double bond, and that the compound having a weight average molecular weight of 3000 or less and having at least one carboxylic acid group is selected from the group consisting of an phthalic acid derivative, a

trimellitic acid derivative, pyromellitic acid derivative, a succinic acid derivative, and a glycine derivative.

As previously noted, Arias uses a phenol resin as a binding polymer. The phenol resin has a property in which the interaction with resins is reinforced as time advances, which causes low development efficiency. For this reason, benzoic acid with low pKa is added to the phenol resin to facilitate development and improve stability over time.

Benzoic acid is not included as the compound having a weight average molecular weight of 3000 or less and having at least one carboxylic acid in the present claims and there is no teaching or suggestion in cited references that would lead one of ordinary skill in the art to expect that stability over time could be improved by adding a carboxylic acid other than benzoic acid in the case of other resins other than a phenol resin.

Further, Aoshima does not use a phenol resin. Therefore, one of ordinary skill in the art would not have been motivated to combine Aoshima and Arias as suggested by the Examiner with a reasonable expectation of success.

In addition, the development facilitating system between the present invention and Arias is completely different. In the present invention, since defective development occurs when a binder is adsorbed by the surface of an aluminum substrate, by adding a compound having a weight average molecular weight of 3,000 or less and having a carboxylic acid group as recited in the present claims, which is easily adsorbed with aluminum substrate, the binder is inhibited from being adsorbed onto the substrate. Stability over time is thereby improved in the present invention.

Further, Arias et al does not relate to a negative photosensitive composition based on the radical polymerization system of the present invention and Aoshima et al. That is, Arias et al does not describe “an addition-polymerizable compound having at least one ethylenically unsaturated double bond” as recited in present claim 1. Thus, one of ordinary skill in the art would not have been motivated to combine the references as suggested by the Examiner.

Moreover, during storage, a small amount of radicals generated from the polymerization initiator by heat or light may cause the non-image area to be cured, resulting in scumming during printing. The present invention discloses, especially in the Examples, that the above specific problem for a radical polymerization system can be solved by using the carboxylic acid compound of claim 1.

Based on the disclosures of Aoshima and Arias et al, one of ordinary skill in the art would not expect to solve the problem which is peculiar to the radical polymerization system. The reasons are that the invention of Arias does not relate to a radical polymerization system, and while there is a statement regarding a stabilizing acid, it would not have been obvious for a person skilled in the art to understand the mechanism and purpose of the stabilizing acid. Thus, there is no motivation to combine the references and the present invention is not rendered obvious in any event.

Oshima does not remedy the deficiencies of Aoshima and Arias et al.

Accordingly, Applicants respectfully request withdrawal of the rejections.

Amendment under 37 C.F.R. § 1.116
Application No. 10/782,852

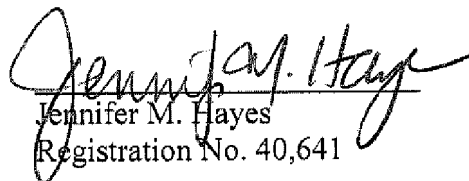
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II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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